

a plurality of pixels formed on the head,
wherein the head includes a curved part on a surface of the head.

28. (New) The printing device of claim 27, further comprising a first rotary drum, wherein a surface of the drum forms the curved part.

29. (New) The printing device of claim 28, wherein each of the pixels independently forms an electric field while the first rotary drum is rotating.

30. (New) The printing device of claim 29, further comprising a plurality of first electrodes, each of the first electrodes corresponding to a respective pixel.

31. (New) The printing device of claim 30, further comprising a second electrode opposing the first drum, the electric field being formed therebetween.

32. (New) The printing device of claim 32, further comprising a second rotary drum, wherein the second electrode is formed on the second rotary drum.

33. (New) The printing device of claim 30, further comprising a plurality of switching elements, each of the switching elements corresponding to a respective pixel.

34. (New) A printing device which writes a pattern on an electronic paper with an electric field, comprising:

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a first rotary drum; and
a second rotary drum opposing the first rotary drum,
wherein at least one of the first rotary drum and the second rotary drum
includes a plurality of pixels, and each of the pixels independently forms an electric field
while both the first and second rotary drums are rotating.

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35. (New) The printing device of claim 34, further comprising a
mechanism for rotating at least one of the first rotary drum and the second rotary drum in a
direction, the direction being opposite to a direction in which the other rotary drum rotates.

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36. (New) The printing device of claim 35, further comprising a plurality
of switching elements, each of the switching elements corresponding to a respective pixel.

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37. (New) A printing device which writes a pattern on an electronic paper
with an electric field, comprising:

a first head that forms a first electric field, wherein the first electric field
resets a pre-written pattern on the electronic paper; and

a second head that forms a second electric field, wherein the second electric
field writes a pattern on the electronic paper; and

a plurality of pixels formed on at least one of the first and the second head,
each of the pixels independently forming at least one of the first and the second electric
fields.

38. (New) The printing device of claim 37, wherein the one of the first and the second heads comprises a plurality of electrodes, and each of the electrodes corresponds to a respective pixel.

39. (New) The printing device of claim 38, wherein the one of the first head and the second head includes a first rotary drum on which the plurality of electrodes are formed.

40. (New) The printing device of claim 39, wherein the other of the first head and the second head includes a second rotary drum.

41. (New) The printing device of claim 37, further comprising a plurality of switching elements, each of the switching elements corresponding to a respective pixel.

42. (New) A method for writing a pattern on an electronic paper with an electric field, comprising:

providing an electronic paper,

rotating a first rotary drum on the electronic paper; and

applying the electric field towards the electronic paper while the first rotary drum is rotating,

wherein the first rotary drum includes a plurality of pixels formed thereon, and each of the pixels independently forms the electric field.

43. (New) The method of claim 42, further comprising:
rotating a second rotary drum on the opposite side of the first rotary drum,
wherein the second rotary drum rotates in a direction opposite to a direction
in which the first rotary drum rotates, the electric field being formed between the first and
the second rotary drums.

44. (New) A method for writing a pattern on an electronic paper with an
electric field, comprising:

providing an electronic paper;

applying a first electric field to the electronic paper, wherein the first electric
field resets a pre-written pattern on the electronic paper; and

applying a second electric field to the electronic paper, wherein the second
electric field writes a pattern on the electronic paper after the pre-written pattern is reset;

wherein a plurality of pixels forms at least one of the first and second electric
fields, and each of the pixels independently forms the electric field.

45. (New) An electronic paper comprising:

a base layer;

an electronic ink layer provided on the base layer, the electronic ink layer
including a binder with transparency; and

a main capsule body exhibiting light transmissivity;

a solvent enclosed in the main capsule body; and

a plurality of particles, which are electrically charged, being dispersed in the

solvent.

46. (New) The electronic paper of claim 45, wherein the plurality of particles are colored and the color is different from that of the solvent.

47. (New) The electronic paper of claim 45, wherein a micro-capsule is formed by the main capsule, the solvent and the plurality of particles, the electronic paper further comprising a covering layer that covers the microcapsule.

48. (New) The electronic paper of claim 47, wherein a specific gravity of the plurality of particles is substantially equal to that of the solvent.

49. (New) The electronic paper of claim 48, wherein the covering layer has a certain thickness, the certain thickness making the specific gravity of the solvent and the plurality of particles substantially equal.

50. (New) The electronic paper of claim 47, comprising a plurality of the micro-capsules in the binder.

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